Electronic Version
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Claims

[c1] A method of controlling an automotive vehicle comprising:
determining a forward direction of the vehicle and generating a forward direction signal;
determining a reverse direction of the vehicle and generating a reverse direction signal;
applying brake-steer in response to the forward direction signal as a function of a first threshold; and
applying brake-steer in response to the reverse direction signal as a function of a second threshold different than the first threshold.

[c2] A method as recited in claim 1 wherein generating a reverse direction signal comprises generating a reverse direction signal from a shift lever.

[c3] A method as recited in claim 1 wherein generating a reverse direction signal comprises generating a reverse direction signal from a push button.

[c4] A method as recited in claim 1 wherein generating a reverse direction signal comprises generating a reverse direction signal from a transmission controller.

[c5] A method as recited in claim 1 wherein generating a reverse direction signal comprises generating a reverse direction signal from a wheel speed sensor.

[c6] A method as recited in claim 1 wherein applying brake-steer in response to the forward direction signal comprises applying at least one brake at a first wheel to reduce a vehicle turning radius.

[c7] A method as recited in claim 1 wherein applying brake-steer in response to the forward direction signal comprises applying an increased drive torque to a second wheel relative to a first wheel.

[c8] A method as recited in claim 1 wherein applying brake-steer in response to the forward direction signal comprises increasing normal load on at least one wheel.

[c9] A method as recited in claim 1 wherein generating a forward direction signal comprises generating a forward direction signal from a shift lever.

[c10] A method as recited in claim 1 wherein generating a forward direction signal comprises generating a forward direction signal from a push button.

[c11] A method as recited in claim 1 wherein generating a forward direction signal comprises generating a forward di-

rection signal from a transmission controller.

[c12] A method as recited in claim 1 wherein generating a forward direction signal comprises generating a forward direction signal from a wheel speed sensor.

[c13] A method as recited in claim 1 wherein applying brake-steer in response to the reverse direction signal comprises applying at least one brake at a first wheel to reduce a vehicle turning radius.

[c14] A method as recited in claim 1 wherein applying brake-steer in response to the reverse direction signal comprises applying an increased drive torque to a second wheel relative to a first wheel.

[c15] A method as recited in claim 1 wherein applying brake-steer in response to the reverse direction signal comprises increasing normal load on at least one wheel.

[c16] A method as recited in claim 1 wherein the second threshold is less than the first threshold.

[c17] A method as recited in claim 1 wherein the second threshold is greater than the first threshold.

[c18] A method as recited in claim 1 further comprising determining a steering wheel angle and wherein applying brake-steer comprises applying brake-steer in response

to the reverse direction signal and steering wheel angle.

[c19] A method as recited in claim 1 further comprising determining a yaw rate and wherein applying brake-steer comprises applying brake-steer in response to the reverse direction signal and said yaw rate.

[c20] A method as recited in claim 1 further comprising determining a steering wheel torque and wherein applying brake-steer comprises applying brake-steer in response to the reverse direction signal and steering wheel torque.

[c21] A method as recited in claim 1 further comprising determining a steering wheel angle and a vehicle velocity and wherein applying brake-steer comprises applying brake-steer in response to the reverse direction signal and steering wheel angle and vehicle velocity.

[c22] A vehicle comprising:
means to determine a forward direction and generate a forward direction signal;
means to determine a reverse direction and generate a reverse direction signal; and
a controller coupled to the shift lever, said controller programmed to apply brake-steer in response to the forward direction signal as a function of the first threshold and apply brake-steer in response to the reverse di-

rection signal as a function of the second threshold different than the first threshold.

[c23] A system as recited in claim 22 wherein said controller is programmed to brake-steer by applying a first brake and a second brake to reduce the turning radius of the vehicle.

[c24] A system as recited in claim 22 wherein said controller is programmed to brake-steer by applying at least one brake at a first wheel to reduce a vehicle turning radius.

[c25] A system as recited in claim 22 wherein said controller is programmed to brake-steer by applying an increased drive torque to a second wheel relative to the first wheel.

[c26] A control system as recited in claim 22 further comprising a steering wheel angle sensor generating a steering wheel angle signal, said controller programmed to apply brake-steer in response to the reverse direction signal and the steering wheel angle signal.

[c27] A control system as recited in claim 22 further comprising a yaw rate sensor generating a yaw rate signal, said controller programmed to apply brake-steer in response to the reverse direction signal and yaw rate signal.

[c28] A control system as recited in claim 22 further compris-

ing a steering wheel torque sensor generating a steering torque signal, said controller programmed to apply brake-steer in response to the reverse direction signal and steering torque signal.

[c29] A control system as recited in claim 22 further comprising a steering wheel angle sensor generating a steering wheel angle signal and a vehicle velocity sensor generating a vehicle velocity signal, said controller programmed to apply brake-steer in response to the reverse direction signal and steering wheel angle and vehicle velocity signal.

[c30] A vehicle as recited in claim 22 wherein means to determine a forward direction and generate a forward direction signal comprises a shift lever.

[c31] A vehicle as recited in claim 22 wherein means to determine a forward direction and generate a forward direction signal comprises a push button.

[c32] A vehicle as recited in claim 22 wherein means to determine a forward direction and generate a forward direction signal comprises a transmission controller.

[c33] A vehicle as recited in claim 22 wherein means to determine a forward direction and generate a forward direction signal comprises a wheel speed sensor.

[c34] A vehicle as recited in claim 22 wherein means to determine a reverse direction and generate a reverse direction signal comprises a shift lever.

[c35] A vehicle as recited in claim 22 wherein means to determine a reverse direction and generate a reverse direction signal comprises a push button.

[c36] A vehicle as recited in claim 22 wherein means to determine a reverse direction and generate a reverse direction signal comprises a transmission controller.

[c37] A vehicle as recited in claim 22 wherein means to determine a reverse direction and generate a reverse direction signal comprises a wheel speed sensor.